

BRUSHLESS PERMANENT MAGNET WHEEL MOTOR  
WITH VARIABLE AXIAL ROTOR/STATOR ALIGNMENT

Abstract of the Disclosure

A brushless permanent magnet electric machine with a fixed radial air gap is operated to a much higher speed than normal maximum speed by the reduction in effective magnet pole strength. Permanent magnets are supported on the inner surface of an axially movable cylindrical shell. A plurality of magnetic poles provided with wire coils are supported on a stationary cylindrical member cooperate with the permanent magnets on the axially movable cylindrical shell to either cause, or react to, rotation of the axially movable cylindrical shell. The axially movable cylindrical shell and cylindrical member are coaxial. The cylindrical shell is axially movable with respect to the cylindrical member.